

 <b>適航指令發布單</b> <b>Airworthiness Directive Issuance Form</b>			
民航局 AD 編號 AD number	CAA-2016-09-003	發布日期 Date issued	2016/9/13
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	This AD applies to The Boeing Company Model 777-200 and -300ER series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016.		
主旨摘要	To prevent electrical current from passing through the low-pressure oxygen flex hoses in the gaseous passenger oxygen system, which can cause the flex hoses to melt or burn, and a consequent oxygen-fed fire in the passenger cabin.		
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> FAA  <input type="checkbox"/> EASA  <input type="checkbox"/> Brazil  <input type="checkbox"/> Transport Canada Civil Aviation  <input type="checkbox"/> DGAC               </div> <div> <input type="checkbox"/> Germany LBA  <input type="checkbox"/> CAA-NL  <input type="checkbox"/> UK CAA  <input type="checkbox"/> Japan CAB  <input type="checkbox"/> CAA of Israel  <input type="checkbox"/> Other _____               </div> </div>		
	設計國 AD 編號 Original AD number	2016-18-02	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 35. Reference: Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016.		
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>			

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2016-9047; Directorate Identifier 2016-NM-092-AD; Amendment 39-18632; AD 2016-18-02]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 777-200 and -300ER series airplanes. This AD requires replacing the low-pressure oxygen flex hoses with new non-conductive low-pressure oxygen flex hoses in the gaseous passenger oxygen system in airplanes equipped with therapeutic oxygen. This AD was prompted by a determination that the low-pressure oxygen flex hoses in the gaseous passenger oxygen system can potentially be conductive. We are issuing this AD to prevent electrical current from passing through the low-pressure oxygen flex hoses in the gaseous passenger oxygen system, which can cause the flex hoses to melt or burn, and a consequent oxygen-fed fire in the passenger cabin.

**DATES:** This AD is effective September 15, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 15, 2016].

We must receive comments on this AD by October 17, 2016.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9047.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9047; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Susan Monroe, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA; phone: 425-917-6457; fax: 425-917-6590; email: [susan.l.monroe@faa.gov](mailto:susan.l.monroe@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

This AD was prompted by a determination that the low-pressure oxygen flex hoses in the gaseous passenger oxygen system can potentially be conductive. Conductive oxygen hoses in the flight compartment were addressed previously in AD 2012-13-05, Amendment 39-17107 (77 FR 41045, July 12, 2012).

The gaseous passenger oxygen system equipped with therapeutic oxygen is not continuously pressurized and must be activated by the flightcrew. Exposure to electrical faults, such as unintended short circuits, can result in localized electrical heating of the low-pressure oxygen flex hoses. This condition, if not corrected, could result in electrical current passing through the low-pressure oxygen flex hoses, which can cause flex hoses to melt or burn, and a consequent oxygen-fed fire in the passenger cabin.

### **Related Service Information Under 1 CFR Part 51**

We reviewed Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016. The service information describes procedures for replacing the low-pressure oxygen flex hoses with new non-conductive low-pressure oxygen flex hoses in the gaseous passenger oxygen system in airplanes equipped with therapeutic oxygen. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

## AD Requirements

This AD requires accomplishing the actions specified in Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016. For information on the procedures, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9047.

## FAA's Justification and Determination of the Effective Date

There are currently no domestic operators of this product. Therefore, we find that notice and opportunity for prior public comment are unnecessary and that good cause exists for making this amendment effective in less than 30 days.

## Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2016-9047 and Directorate Identifier 2016-NM-092-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

## Costs of Compliance

Currently, there are no affected U.S.-registered airplanes. If an affected airplane is imported and placed on the U.S. Register in the future, we provide the following cost estimates to comply with this AD:

Estimated costs			
Action	Labor cost	Parts cost	Cost per product
Replacement	33 work-hours × \$85 per hour = \$2,805	\$15,173	\$17,978

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

## Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs" describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



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**2016-18-02 The Boeing Company:** Amendment 39-18632; Docket No. FAA-2016-9047; Directorate Identifier 2016-NM-092-AD.

**(a) Effective Date**

This AD is effective September 15, 2016.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 777-200 and -300ER series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016.

**(d) Subject**

Air Transport Association (ATA) of America Code 35, Oxygen.

**(e) Unsafe Condition**

This AD was prompted by a determination that the low-pressure oxygen flex hoses in the gaseous passenger oxygen system in airplanes equipped with therapeutic oxygen can potentially be conductive. We are issuing this AD to prevent electrical current from passing through the low-pressure oxygen flex hoses in the gaseous passenger oxygen system, which can cause the flex hoses to melt or burn, and a consequent oxygen-fed fire in the passenger cabin.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Replacement**

Within 72 months after the effective date of this AD: Replace the low-pressure oxygen flex hoses with new non-conductive low-pressure oxygen flex hoses in the gaseous passenger oxygen system in airplanes equipped with therapeutic oxygen, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016.

**(h) Parts Installation Prohibition**

As of the effective date of this AD, no person may install on any airplane a low-pressure oxygen flex hose having a part number that is specified to be removed from an airplane in the

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (i)(4)(i) and (i)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or sub-step is labeled "RC Exempt," then the RC requirement is removed from that step or sub-step. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(j) Related Information**

For more information about this AD, contact Susan Monroe, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA; phone: 425-917-6457; fax: 425-917-6590; email: susan.l.monroe@faa.gov.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 777-35-0041, dated April 8, 2016.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 18, 2016.

Dorr M. Anderson,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.